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CORE FUNCTIONS: USEFUL CONCEPT FOR ARMY PLANNING

A MONOGRAPH
BY
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School of Advanced Military Studies
United States Army Command and General Staff
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ABSTRACT

CORE FUNCTIONS: USEFUL CONCEPT FOR ARMY PLANNING? by MAJ
John E. Frame, USA, 49 pages.

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functional approach to planning. The January 1997
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functions to the fundamentals of Army operations. Core
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functional method of planning.

        The core functions and the Battlefield Operating
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        The monograph concludes that the core functions are
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The core functions are more adaptable to the broad range of
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Useful Concept for Army Planning?

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Table of Contents

I. INTRODUCTION

> Lack of science leads to chaos in art...[1]
>   --*Major General J.F.C. Fuller*

Commanders and planners are military artists. Each operation or campaign they conceive is unique and based on their creativity and knowledge of warfare. The knowledge of warfare is based on experience and study.

Over the last two centuries, military theorists have sought to identify and compile the basic truths of war. They studied both the successes and failures of battlefield commanders and armies to discover common characteristics and principles of war. The organized knowledge of war and the development of principles represent science and theory. Science is the study and theory is the organized knowledge of the subject.[2] Each principle and axiom provides a necessary background for planning and conducting an operation.

> "to deny a science of war and then to theorize on war as an art is pure military alchemy, a process of reasoning which for thousands of years has blinded the soldier to the realities of war, and will continue to blind him until he creates a science of war upon which to have his art."[3] -- *Major General J.F.C. Fuller*

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Science and theory provide the basis for doctrine or norms for armed forces. They are essential to a unified basis for warfighting.

CORE FUNCTIONS

The January 1997 Coordinating Draft of FM 100-5 Operations proposed the introduction of five core functions to United States Army doctrine. These core functions (See, Shape, Shield, Strike, and Move) were added to the fundamentals of army operations alongside the principles and characteristics of operations.[4]

The idea of core functions is not new to the study of military science. Past theorists have used similar descriptions of battlefield actions to explain warfare. Two of these descriptions provided the basis for the proposed core functions. The views of J.F.C. Fuller and E.S. Johnston were melded and modified to meet the requirements of the Army (see figure 1).[5]

Fuller	Johnston	100-5 Coord Draft
Discover	Find	See
Hold	Fix	Shape
Hit	Fight	Strike
Protect	Follow	Shield
Smash	Finish	Move
	Fend	

Figure 1. Basis of Core Functions

The coordinating draft introduces and describes the core functions. It does not provide a use for these concepts or define application by army commanders and planners. A diagram depicts them in process between the principles and operating systems.[6]
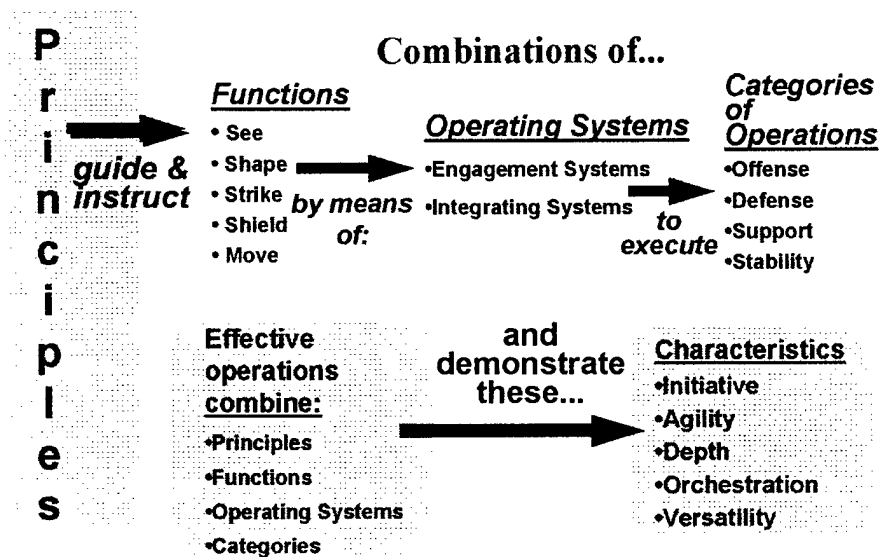
Combinations of...

P r i n c i p l e s

guide & instruct

Functions
- See
- Shape
- Strike
- Shield
- Move

by means of:

Operating Systems
- Engagement Systems
- Integrating Systems

to execute

Categories of Operations
- Offense
- Defense
- Support
- Stability

Effective operations combine:
- Principles
- Functions
- Operating Systems
- Categories

and demonstrate these...

Characteristics
- Initiative
- Agility
- Depth
- Orchestration
- Versatility

Figure 2. Relationship of the Fundamentals of Army Operations[7]

This presentation leads to questions of utility and procedural implementation in concept development.

PROBLEM

Are the core functions of use to the army planner? As described earlier, planners are faced with the difficult

3

practice of the art of war. Science can serve these planners in two ways. First, as theory, it can educate the planner before the expectation of performance. This gives the planner the opportunity to internalize the truths of war and apply them when solving military problems. Second, as doctrine, science can more practically be used to actively develop solutions.

METHODOLOGY

The study begins in Chapter II with establishment of the definition and background of the core functions. Chapter III describes the theoretical basis for the core functions. It includes a review of similar and relevant writings of land warfare theorists. These works are studied to identify the common tasks and the writer's ascribed purpose. In Chapter IV, doctrine is evaluated to determine the current doctrinal process and framework for concept development and synchronization. The Battlefield Operating Systems (BOS) and Operational Operating Systems (OOS) are reviewed as a part of doctrine. Chapter V will compare the core functions to the BOS and OOS. This comparison is performed to determine if the core functions provide a better framework for thinking about Army operations and the development of operational concepts. Finally, Chapter VI

reviews the findings developed in the study and answers the research question.

EVALUATIVE CRITERIA

To be useful to the planner, core functions must outline key actions of an operational concept. They must give the planner a simple and holistic method to view the broad range of Army operations. Today's operations require the Army to consider non-traditional organizations and task assignments. The core functions must enable the commander or planner to assign tasks to resources in a non-prejudicial fashion. Currently, operating systems are the basis for concept development and synchronization of operations. They mold how commanders and planners think about and plan operations.

RELEVANCE

Clear and useful doctrine is critical to operational and tactical commanders. Field Manual 100-5 guides how the Army thinks about war. Therefore it is important that the process and knowledge presented in the manual be useful and accepted by both the commander and planner.

II. CORE FUNCTIONS

The January 1997 Coordinating Draft of FM 100-5 Operations introduces five core functions to the fundamentals of Army operations. Core functions are identified in the draft manual as: *See, Shape, Shield, Strike,* and *Move.* Previous editions of FM 100-5 Operations have not included anything similar to the core functions. This chapter presents the description and purpose of the core functions outlined in the draft manual.

The core functions are described as "the fundamental actions forces take to apply military power."[8] They are universal. They apply to all Army operations regardless of type and size.[9] The manual states that they are only useful in relationship to one another and the objective being sought.[10] In this way, the functions are presented as components of a whole. Together they make up the total actions of the force in action. Each of the functions is an identifiable part of the operation.

The function See mandates that the commander, "gain and maintain knowledge of elements of METT-TC at all appropriate echelons."[11]

Seeing is more than the possession of information, it is understanding. A commander must understand all aspects of the battlefield to direct the force. This is a reflection of the classical Sun Tzu maxim: Know the enemy, Know yourself, Know the Terrain.[12] Similarly, the coordinating draft describes the focus in direction of seeing in four areas: enemy, friendly force, neutrals, and environment.[13]

Seeing the enemy. The objective of understanding the enemy is to identify weaknesses to attack and strengths to avoid. The enemy's past and current actions, capabilities, and dispositions are analyzed continuously and synthesized to determine his intentions. This helps the friendly force to seize and retain initiative.[14]

Seeing the friendly force. The force commander must understand the capabilities and limitations of his own organization. This knowledge is critical to effective employment of the force. In addition to understanding the physical aspects of his force, members of the unit must understand the higher commander's intent. They must be knowledgeable of how their actions relate to other

organizations and contribute to the achievement of the objective.[15]

Seeing Neutrals. Neutral parties can affect the operation in many ways. Sometimes their actions can be enhance friendly force action, other times they can reduce force effectiveness. It is necessary for the force to understand the interests and intentions of neutral parties. This knowledge allows the commander to direct operations in a manner that prevents the opposition of uncommitted parties or enlists their support.

Seeing the environment. The environment can have significant effect on the success of the operation. Weather and terrain can degrade unit effectiveness or cause mission failure if not understood.

SHAPE

"Establish the optimum environment for conducting operations. Shape enemy, friendly, and neutral elements."[16]

The objective of shaping the battlespace is to place friendly forces in a position of strength and enemy forces in a position of weakness. Like seeing, shaping is planned and conducted in four areas.

Shaping the enemy. Shaping the enemy places him/her in a weak condition and position. It abolishes the enemy's

freedom of action and reduces his ability to respond to friendly actions.[18]

Shaping Friendlies. Shaping friendlies consists of all efforts to prepare friendly forces for action. Organizing and resourcing units is central to obtaining a force capable of mission accomplishment.[19]

Shaping Neutrals. Neutrals are shaped to gain their acceptance or support of the friendly operation. Actions by all members of the friendly force determine how uncommitted groups will respond. Directed actions of Public Affairs, PSYOP and Civil Affair programs are focused on shaping neutrals.[20]

Shaping the environment. Actions are taken to enhance the actions of friendly forces and improve the capacity of support facilities. The environment is shaped primarily by engineer operations.[21]

SHIELD

"Deny opponents the ability to threaten the force or interfere with operations, and preserve strength through preventive action."[22]

The objective of shielding is to preserve the power of friendly forces and assure operational freedom. Shielding prevents the enemy from acquiring critical information,

striking effectively, or moving to counter friendly

actions.[23]

STRIKE

"Apply lethal and nonlethal capabilities to achieve

objectives."[24]

    Striking is the decisive application of power.

Striking is different actions in different operations. It

can be the traditional application of fires and maneuver in

combat operations, or the provision of essential supplies

and services in stability or support operations.[25] Striking

can compel or deter the enemy or support and reassure

allies.

MOVE

"Position and reposition forces."[26]

    Forces are moved to meet the requirements of current

operations and in anticipation of follow-on operations.

Offensive requirements include the defeat of counterattacks,

conduct of pursuit, and exploitation. While in the defense,

the force must be prepared to counterattack and shift to the

offense. During support and stability operations, resources

must be transferred in response to crises and changing

needs.[27]

The core functions are new to FM 100-5, but not to the thought and practice of war. They are founded on the writings of both classical and modern military theorists. The next chapter will review the roots of the core functions. It will examine the similarities and differences between those outlined in the coordinating draft and the writings of military theorists.

III. THEORY

"The Art of War, like every other art, possesses its theory, its principles; otherwise, it would not be an art."[28] -- *Marshal Foch*

The core functions are a product of military thought developed over many centuries. Theorists and battlefield leaders sought to define the fundamental actions of military forces as realized through experience and analysis of actions in battle. The core functions are based on the historical or traditional theory and science of war. While not as well known as the principles of war, they emerge together and are related.

This chapter examines and compares the descriptions and utility of functional concepts presented by military theorists of the classical and modern age. The comparison begins with Sun Tzu and the functions of normal and extraordinary forces.

SUN TZU

Sun Tzu was one the first military writers. The Art of War represents the collection of Sun Tzu's thoughts on war in the fourth century B.C. In this military classic, Sun

Tzu described the interrelated functions of the *normal* and

extraordinary forces.[29]

Sun Tzu theorized the existence of two basic forces

with different, but related functions. He simplified the

conduct of military planning by describing each operation as

a product of these two forces.

"In battle there are only the normal and the
extraordinary forces, but their combinations are
limitless; none can comprehend them all."[30]

Sun Tzu describes engagement or fixing and distraction

as the functions of the normal force (figure 3). The

extraordinary force is employed to win, flank/envelop, and

achieve the decision.[31]

FORCE	*FUNCTION*
Normal	Engage, Fix, Distract
Extraordinary	Win, Flank/Envelop, Decision

Figure 3.   Sun Tzu's Forces and Functions

It appears Sun Tzu intended these passages to assist

leaders in developing battlefield plans. His explanation of

the combination of forces was intended to simplify their

thought and help them direct action.

The functions that Sun Tzu described were refined in the beginning of this century. In 1903, Marshal Ferdinand Foch of the French Army described fundamental points of war in Des Principes de la Guerre (translated and published in english as The Principles of War in 1918).[32]

MARSHAL FOCH

The Principles of War described the organization and tasks of army units for battle. Foch outlined five tasks that the commander must consider. He stated that a mobile and unknown enemy must be: *discovered, reconnoitered, fixed or pinned* and *struck*. Foch further posited that the combination of forces must also be guarded.[33]

Sun Tzu Forces	Foch Tasks	Foch Troop Qualities	Foch Organization
Normal	Discover Reconnoiter Fix Guard	Resisting Power	Advance Guard
Extraordinary	Strike	Striking Power	Main Body

Figure 4. Sun Tzu and Marshal Foch

Marshal Foch developed a system for organization of forces based on the two qualities of troops.[34] These

qualities and the organization of forces are quite similar

to Sun Tzu's description of the normal and extraordinary

force as illustrated in figure 4.

Foch intended the outlined tasks to guide the commander

in identifying necessary actions and organizing the force

for combat.[35] He referred to them repeatedly in his

numerous descriptions of historical and modern battle. Foch

described in detail the simultaneous and sequential nature

of the tasks.

During the 1920s and 1930s, two British theorists,

Major General J.F.C. Fuller and Captain B.H. Liddell Hart,

further identified core functions for combat operations as

they struggled to develop a science of modern war. Major

E.S. Johnston, U.S. Army, followed the others and described

the functions during his study of military art and science

in 1934.

B.H. LIDDELL HART

Liddell Hart was a 20th century British theorist who

strove to deduce basic truths of war and forecast the future

of warfare. He, like J.F.C. Fuller, attempted to change

British organization and strategy during the interwar years

between World War I and World War II. Fuller and Hart saw

that traditional British Army doctrine was not practical in

the new age of mobile warfare. Liddell Hart developed a few

theories over the years that summarized his thoughts on war. The Theory of the "Indirect Approach", The "Man-in-the-Dark" Theory of War, and The "Expanding Torrent" System of Attack all described beliefs that Hart had developed as he studied war.

In 1920, Liddell Hart penned an analogy to combat of two men fighting in the dark.[36] The article outlined the "correct principles of action" that a man in the dark or a commander in modern war would adopt. This analogy was printed several times in different military periodicals of the period, but was first published in the 1920 in National Review. The analogy provides an interesting depiction of two equal combatants who are initially blind to their opponent. The 'man-in-the-dark' had to seek his enemy, feel his way to a highly vulnerable spot, seize his adversary firmly, strike his opponent from an unexpected direction in an unguarded spot, then follow up his advantage.[37]

These five actions were developed into five essential principles: *Protective Formation, Reconnaissance, Fixing, Decisive Maneuver,* and *Exploitation.* These were further simplified into two categories of action: *guarding* and *hitting.* Guarding consisted of protective formation, reconnaissance and fixing. The objective of these actions was security. Hitting was the decisive action achieved by decisive maneuver and exploitation.[38] These two categories

of action bear striking resemblance to Sun Tzu's normal and
extraordinary force and Marshal Foch's resisting and
striking power shown in figure 5.

Sun Tzu Forces	Foch Qualities	Foch Tasks	Liddell Hart Categories of Action	Liddell Hart Essential Principles
Normal	Resisting	Guard	Guarding	Protective Formation
		Discover/ Reconnoiter		Reconnaissance
		Fix		Fixing
		Guard	Hitting	Decisive Maneuver
Extraordinary	Strike	Strike		Exploitation

Figure 5. Sun Tzu, Foch and Liddell Hart

Liddell Hart's purpose in developing the "Man-in-the-
Dark" Theory was to teach junior infantry commanders the
necessary actions of combat. They needed a simple guide to
understand how to organize forces and direct action.
Liddell Hart felt that teaching these leaders a simple
theory of essential tactical principles, and the sequence of
action, would simplify their thought.[39]

J.F.C. FULLER

Like Hart, Fuller produced and published a series of articles and books that retained certain common threads of thought. His writings in the early 1920s focused on development of a science of war for the modern age. The Reformation of War, published in 1923, mentions that a man must do the following to defeat his adversary: will to do so, move towards him, hit him, and prevent himself from being hit. Fuller uses these requirements to introduce the physical elements of movement, weapons, and protection.[40] This list of actions are not further addressed as the principles of modern war are examined.

In The Foundations of the Science of War, Fuller describes functions in his discussion of the physical elements. Fuller identifies the physical elements of war as movement, protection, and weapons, instead of the power to move, to guard, and to hit, or mobility, protective power, and offensive power. He describes both the former and the later as elements of combat power with different labels.[41] This association is confusing. Fuller appears at this point to disregard the difference between action and characteristics of the force. The book does end, though, with a return to the basis of the physical elements with the simple exclamation of "Guard, Hit, Move".[42]

In an article for Infantry Journal published in 1927, Fuller clarified his thoughts on the functions.[43] He revealed a full description and use for his version of the core functions. This explanation offered a clearer description of the actions of an army in the field. Fuller described the old way of thinking by branches as obsolete and limiting. Thinking functionally, he argued was useful as a method to think without prejudice.[44]

Foch Tasks	Liddell Hart Essential Principles	Fuller Tactical Functions
Guard	Protective Formation	Protect
Discover/ Reconnaissance	Reconnaissance	Discover
Fix	Fixing	Hold
Strike	Decisive Maneuver	Hit
	Exploitation	Smash

Figure 6. Foch, Liddell Hart and Fuller

E.S. JOHNSTON

An American, Major E.S. Johnston, published an article titled "A Science of War" in the June 1934 edition of the Review of Military Literature, forerunner of Military Review. He described the article as a continuation of the work by Fuller and Liddell Hart in developing the science of war.[45] His purpose was to convince the reader that science offered the key to helping leaders become experts.

Johnston's article described the science of war and offered an example of its application to a combat scenario. He identified the acts that military forces perform in battle during his review of the science of war.

> "If we reduce the operations of war to their simplest terms, we find that any given element of combat power , whether an individual or a large force, performs the following acts:
> "Fending"
> "Finding" the opponent.
> "Fixing" (holding, pinning) the opponent, when found: that is , restricting his power to move, so that he may be "set up" as a target for the decisive blow; the bayonet-man may not be able to deliver his thrust.
> "Fighting" (striking) the opponent, which implies putting a blow through or past his guard at a vital spot.
> "Following" the opponent.
> "Finishing" him."

This method and description are very similar to Fuller's in The Foundations of the Science of War. Johnston too failed to give the reader any insight on how the acts should be applied to achieve practical ends. He provided an example of the tactical planning of an operation at the

conclusion of his article. The example illustrated the
utility of the principles and the means, but failed to
describe how the planner could use the acts in developing
his concept of battle.[47]

Foch Tasks	Liddell Hart Essential Principles	Fuller Tactical Functions	Johnston Acts
Guard	Protective Formation	Protect	Fending
Discover/ Reconnoiter	Reconnaissance	Discover	Finding
Fix	Fixing	Hold	Fixing
Strike	Decisive Maneuver	Hit	Fighting
	Exploitation	Smash	Following & Finishing

Figure 7.   Comparison of Tasks

Adding Johnston to the chart completes the review of
the historical development of the core functions. It is
apparent that the five core functions are based
predominately on the work of Liddell Hart and J.F.C. Fuller.
Liddell Hart's "Man-In-The-Dark" Theory describes the
functions and their sequential relationship. Fuller's
description of functions identifies a functional approach to

tactical and operational thought. This functional approach is valuable because of the continuing evolution of the technologies and arms in war.

Foch, Hart, Fuller and Johnston used the functions to simplify the battlefield. They sought to change and improve the ability of leaders to organize and direct action in an effective manner. To determine whether the functions are useful to leaders and planners in the development of concepts, it is necessary to next evaluate doctrine.

IV. DOCTRINE

Doctrine is an authoritative description of sanctioned organizational thought. The Army's keystone doctrine is presented in FM 100-5 Operations. It describes how the Army thinks about war and other operations conducted in support of the nation's interests.

Commanders and planners are charged with developing plans that include the ways, ends, and means. The ultimate outcome is the proper allocation of tasks and resources to achieve the ends or objectives. Current U.S. Army doctrine provides frameworks for the analysis of objectives and the identification of resources. No doctrine or theory is prescribed for understanding common battlefield tasks performed in each and every mission. Consequently , U.S. Army operations are developed and synchronized using a resource method (Battlefield Operating Systems and Operational Operating Systems).

U.S. Army logisticians use an approach that could be described as a function rather that resource method. Their tactical logistic functions transmit simply an understanding of common support tasks. These functions are a useful guide in the development and presentation of support concepts and the allocation of resources. This chapter reviews FM 100-5

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and other doctrinal manuals which delineate methods for

planning Army operations.

FM 100-5 OPERATIONS

FM 100-5 describes the three levels of warfare where

Army planning takes place. It describes key thoughts that

pertain to the Army at the strategic, operational, and

tactical levels of war. However, the focus of the manual is

on the operational level. The operational level is where

campaigns and major operations are planned and conducted to

accomplish strategic objectives.[48]

Operational Art

Commanders and planners at this level practice

operational art in developing concepts and plans for the

employment of military forces. Operational art is described

as:

> "...the skillful employment of military forces to
> attain strategic and/or operational objectives within a
> theater through the design, organization, integration,
> and conduct of theater strategies, campaigns, major
> operations, and battles."[49]

Operational art is performed in consideration of ways,

ends, and means. These thoughts and their relationship are

best described by three questions that the commander or planner must answer.

What military conditions (operational objectives) will achieve the strategic objectives in the theater of war or theater or operations? (*ends*)

What sequence of actions is most likely to produce these conditions? (*ways*)

How should the commander apply military resources within established limitations to accomplish that sequence of actions? (*means*) [50]

The functions are conducted both simultaneously and sequentially in the theater of operations. Simultaneous operations are conducted by forces that are main and supporting efforts. Sequential operations are performed to achieve a multi-stage or phase objective. These operations must be synchronized to ensure the force achieves the maximum benefit of all actions. This synchronization is difficult and must be planned and rehearsed. Commanders and planners categorize battlefield activities by operating system to simplify their thoughts in developing these complex operations.[51]

Battlefield Operating Systems (BOS)

FM 100-5 is primarily an operational manual, but presents tactical level operating systems. The battlefield

operating systems (BOS) are important to Army tactical

doctrine. They are versatile and useful to the planning,

preparation and execution of operations. The manual

describes them as the combat functions: intelligence,

maneuver, fire support, air defense, mobility and

survivability, logistics, and battle command.

The manual directs the commander (or planner) to

consider these systems in developing operational plans.

> "To synchronize forces and effects on the
> battlefield, Army leaders examine large, complex
> operations in terms of functional operating systems
> that exist at each level of war. At the tactical level
> the battlefield operating systems (BOS), for example,
> enable a comprehensive examination in a straightforward
> manner that facilitates the integration, coordination,
> preparation, and execution of successful combined-arms
> operations. The BOS has other applications at the
> operational and strategic levels."[52]

Tactical Logistics Functions

Chapter 12, Logistics, of FM 100-5 presents a unique

way to think about one of the operating systems, It

describes a functional approach to the accomplishment of

tactical logistics. Tactical logistic functions are:

manning, arming, fueling, fixing, fueling, moving, and

sustaining soldiers and their systems.[53] These functions

present a simple and complete picture to guide the thoughts

of the logistician. Planning and describing the logistical

support for an operation are simplified by the ever present

categories described in this chapter.

FM 100-7 DECISIVE FORCE: THE ARMY IN THEATER OPERATIONS

FM 100-7 describes how the Army service component commander (ASCC) applies FM 100-5 concepts to a theater of operations. It is focused at the operational level of war and considers the integration of army operations with joint, multinational, and interagency forces.[54]

Operational art and concepts presented in FM 100-7 are common with those already described in FM 100-5. Key elements of operational design are described to assist in translating strategy into tactical action. These elements are: objective, sequence of operations and use of resources, phases, branches and sequels, sequential and simultaneous warfare, and logistics.[55]

Operational-level Operating Systems (OOS)

The Operational Operating Systems are a variation of the battlefield operating systems. They are presented as "logical ways for commanders to describe systematically the integration of functions that occurs in each phase of the campaign plan within a given battle space."[56] Again they are an attempt to simplify the numerous battlefield activities of the force by their reduction to a more manageable set of functions. Even so, they only look at

simultaneous actions. There is no sequential relationship between the operating systems.

Battlefield Operating Systems	Operational Operating Systems
Intelligence	Operational Intelligence
Maneuver	Operational Movement and Maneuver
Fire Support	Operational Fires
Air Defense	Operational Protection
Mobility	
Survivability	
Logistics	Operational Logistics
Battle Command	Operational Battle Commmand

Figure 8. BOS and OOS

These operating systems are similar to the tactical-level battlefield operating systems. They include: operational movement and maneuver, operational fires, operational protection, operational battle command, operational intelligence, and operational logistics.[57]

Including operational protection moves these categories closer to the core functions than the BOS. However, the OOS still resemble the branches or resources of the Army.

FM 101-5 STAFF OPERATIONS AND ORGANIZATIONS

FM 101-5 is the Army's capstone manual for staff organization and operations. It applies directly to corps and subordinate unit staffs. The Military Decision-Making Process (MDMP) is outlined in FM 101-5. The manual describes it as "a doctrinal approach to decision making that helps the commander and his staff examine a battlefield situation and reach logical decisions."[58]

The MDMP is performed in seven steps. The steps are: receive the mission, analyze the mission, develop the course of action, analyze the course of action, compare the course of action, approve the course of action, produce the course of action.[59]

Core functions are not addressed in this manual. Commanders and planners are guided to think in the form of the battlefield operating systems described in FM 100-5. While these are described as functional categories, they are nearly organizational categories or branch. The commander and operations officers are tasked to look across these systems of responsibility and develop a coordinated plan.

This chapter completes the review and evaluation of theory and doctrine. Current U.S. Army doctrine provides frameworks for the analysis of objectives and the identification of resources. No doctrine or theory is

prescribed for understanding common battlefield tasks performed in each and every mission. Consequently , U.S. Army operations are developed and synchronized using a system or resource method (Battlefield Operating Systems and Operational Operating Systems). The next chapter will analyze the adequacy of doctrine to meet the needs of army planning and determine the utility of the core functions.

V. ANALYSIS

> "To simplify the task of the junior commander we require to establish the essential principles of tactics and their relation to the varying phases of battle. We must then fit them into their correct place, both in chronological and tactical sequence, in order to form a simple and truly scientific theory."[60]
> -- *Captain B.H. Liddell Hart*

Today's operational environment demands a responsive method of developing concepts for the employment of military power. United States Military Strategy is based on the rapid projection of military power worldwide. In most instances, operational commanders and planners are given little time to think about a crisis situation before decisions must be made and forces put in motion. Consequently, operational artists need the products of science (theory and doctrine) to effectively practice their art. Theory and doctrine provide the collective knowledge that are the tools of the military artist. This chapter analyzes the theory and doctrine presented in the last two chapters. It outlines the needs of the military artist and shows that the core functions fill a recognizable void in the process of thinking about Army operations that should be included in doctrine.

NEEDS OF THE ARTIST

The Army planner needs a method that simplifies the development of concepts that relate the major sequential and simultaneous actions necessary to achieve the objective. The U.S. Army Training and Doctrine Command (TRADOC) described the environment and requirements for leaders in the future in TRADOC Pamphlet 525-5 Force XXI Operations. It states that future leaders must have intuitive skills of vision, innovation, adaptability and creativity along with the ability to simplify complexities. These leaders will be required to make rapid decisions as they plan missions in more diverse, high pressure operational environments.[61]

Based on this guidance, Army planners have three requirements when thinking about operations. First, the process must be *simple* so that it can be memorized and become routine. This requirement speeds the development of concepts and plans. Second, the process must allow the planner to understand the *whole* of the operation. It should present the simultaneous and sequential actions of the entire force in reaching the objective. Third, the process must allow the planner to exercise creative thought and not prejudice the use of resources. This is increasingly important as forces are reduced and non-traditional operations are performed.

The battlefield operating systems (BOS) and the operational-level operating systems (OOS) outlined in the current manuals are the doctrinal basis for planning and synchronizing operations. The operating systems and the core functions will be analyzed here using the three criteria described above. They will be compared to determine whether the addition of the core functions will improve or degrade the development of concepts for the use of military power.

BATTLEFIELD AND OPERATIONAL-LEVEL OPERATING SYSTEMS

The operating systems dominate military operations. They are used throughout both tactical and operational planning. Staffs integrate the simultaneous and sequential actions of the systems in synchronization or execution matrixes. Leaders identify their forces by system category. Staff officers are assigned to each of the operating systems of the organization. Observers and participants analyze operations and prepare after action reviews using the BOS and the OOS.

Simplicity

Operating systems are descriptions of the means. They describe the resources or tools of the command. As such,

they have improved our knowledge of the organization and the materials available for the operation. However, these systems can perform different tasks based on the tactical problem or operational mission. For example, the fire support system can be used to prepare the battlefield, strike at enemy forces, or protect friendly forces. This problem still requires that the planner understand the basic battlefield actions before applying the means. Intent for the system along with task and purpose must be described to specifically focus each of the systems. The operating systems speed the identification of resources, but still require the assessment of the major tasks or components of the operation in order to develop operational concepts.

Completeness

The BOS were developed to improve the integration and cooperation of all forces on the battlefield. They were seen as a method to identify systematically the actions performed on the battlefield and their internal relationship in the organization. The operating systems are tried and true. They have guided the Army into a better understanding of the integrated actions of the force. Any action can be categorized under one of the systems. Consequently, the current doctrinal framework of BOS and OOS are still useful by adequately presenting the whole battlefield.

Creativity and Prejudice

The operating systems are a consolidation of the
branches that operate on the battlefield. They describe the
systems that have been organized in the armed forces and
their roles or missions. They do not clearly describe what
actions must be performed in every operation. They have
limited application and do not uniformly apply to every
organization or operation. This is similar to the problem
that J.F.C. Fuller identified in 1927.

In Fuller's day the task was to break the mold of
thought limited by weapon or branch. Warfare had been
dominated by the foot soldier and his weapons. According to
Fuller, this had caused close-minded thought in face of the
changing battlefield and resulted in the ineffective use of
new capabilities of armored mobility and air power.[62]

Since Fuller's day weapons have multiplied and are now
categorized by branch and operating system. However,
increasingly we face the same problem. Operating systems
still reflect branches of the Army. Thinking in operating
systems limits the planners consideration of unique and
potentially decisive use of military capabilities. Too much
thought is associated with the traditional employment of
forces in battle.

Inadequacies of BOS and OOS

Thinking in terms of forces and systems is slow and restrictive. It confuses the mind and limits creativity. Today's broader operational environment includes unfamiliar operations. Traditional forces perform non-traditional tasks. The operating systems are not useful in this environment. Operating systems limit the creative implementation of forces and slow decision-making. Preconceived solutions or actions are routine by branch.

FUNCTIONAL METHODOLOGY

A functional thought process is different than the operating systems approach. It frames the operation in common tactical or operational tasks.[63] The commander and planner are guided to the organization of necessary sequential and simultaneous tasks before the allocation of resources.

Simplicity

The core functions are a simple explanation of the tasks to be performed by the military force. They are limited in number and can be applied uniformly to all operations. They can be directly applied to the military

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problem to determine an operational concept. The functions guide the rapid development of tasks.

Completeness

The core functions are a complete expression of the fundamental tactical and operational tasks. With a functional thought, the category of operation or type of unit do not matter. Every type of army operation can be thought of using a functional approach that may not understandable using the battlefield or operational operating systems. The fundamental requirements and operations of the force can be developed using the core functions.

Creativity and Prejudice

Today, we have seen broader missions in different environments. Armed forces today frequently conduct tasks not traditionally performed over the last 20 years. Our force is not formed to perform some of these missions and doctrine is not always available. Looking at the operation in terms of core functions will not only guide the development of tasks, but also the organization of the force.

Additionally, the smaller number of forces has reduced the Army's ability to specialize and focus capability. Army

units must be able to perform numerous tasks. Planners have an extremely difficult task. They must develop concepts that use creatively the smaller force that is not specialized for the operation.

Core Function Contributions

Battlefield operating systems were developed in an era of specialization to analyze systematically the interrelated forces of an operation. Since they are capability oriented they are a poor method of developing and synchronizing operations. There is still a need for doctrine that describes the fundamental actions these systems must perform to develop a complete operation.

SUMMARY

The operating systems are useful in the application of resources to the tasks identified. They assist in the detailed synchronization of systems and units. The operating systems fail to assist the planner in understanding the common actions of every operation. They describe tools rather than tasks.[4] They leave a gap in thought concerning what must be done. Therefor all the tools may be put in action, but a necessary task is left incomplete.

The core functions simplify tactical and operational thought. They provide a complete and unprejudiced vision of the necessary tasks of any military operation.

Functions are a simple and holistic approach to thinking about an operation. They do not limit the creativity of the planner. They can be applied universally regardless of the unit or mission.

The core functions are useful for synchronizing both the simultaneous and sequential operations inherent in current and future operations. They are enduring and will remain useful with the introduction of new weapons and other technologies.

VI. CONCLUSIONS

> "The art of war is simple enough. Find out where your enemy is. Get at him as soon as you can. Strike at him as hard as you can, and keep moving on."[65]
> -- *General U.S. Grant*

Planners are charged with determining the proper actions that must take place to reach the objective. They must arrange these actions simultaneously and sequentially to develop an effective concept for employment of the means or the armed force. The five core functions are a simplification of the many activities that take place during Army operations.

The core functions are useful to army planning at all levels. They are a part of military science that can ably assist the military artist in developing operational concepts. The core functions help the commander and planner understand the fundamental parts or actions of every battle, operation, or campaign. This understanding guides the thoughts of the military artist in the development of plans.

The core functions provide a simple framework that allows the commander and planner to identify and organize sequential and simultaneous tasks of any operation. They can be applied regardless of the organization and operation.

Finally, the core functions stimulate creativity in the military artist. Technologies change and the tasking of military resources is not limited by branch. The core functions allow the commander and planner to think first of what must be done, then of who can do it. This is a marked difference from solely thinking in systems. Thinking by system applies tasks to resources rather than resources to tasks.

Rapid and creative thought will always be treasured in the Army. Thinking in functions is the key to achieving a responsive and flexible force.

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[11] Ibid., II-4-3.

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[14] Ibid., II-4-4.

[15] Ibid., II-4-5 to 4-6.

[16] Ibid., II-4-7.

[17] Ibid.

[18] Ibid., II-4-8.

[19] Ibid., II-4-9.

[20] Ibid.

[21] Ibid., II-4-10.

[22] Ibid.

[23] Ibid.

[24] Ibid., II-4-11.

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[50] Ibid.

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[56] Ibid., 1-5.

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